Plectranthus batianoffii P.I.Forst. (Lamiaceae), a new species from north-east Queensland

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Summary

Forster, P.I. (2008). *Plectranthus batianoffii* P.I.Forst. (Lamiaceae), a new species from north-east Queensland. *Austrobaileya* 7(4): 707–710. A new species (*Plectranthus batianoffii* P.I.Forst.) known from several continental islands in north-east Queensland is described and illustrated. A conservation status of Vulnerable is recommended.

Key Words: Lamiaceae, *Plectranthus batianoffii*, new species, Australian flora, Queensland flora

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Introduction

The genus *Plectranthus* is highly diverse in Australia with at least thirty-five described species (Blake 1971; Forster 1992, 1994, 1996, 1997, 1999). As noted previously (Duretto & Forster 2007), speciation in the genus has occurred where populations occur in isolated areas such as mountain peaks or ranges and where suitable habitat exists on areas of exposed rock pavements and outcrops. This suite of habitat factors has resulted in the "islands on islands" effect (Porembski *et al.* 2000) and is widely recognized as being a driving force in genetic diversity and speciation (Carlquist 1974; Grant 1981; Hopper 2000; Seine *et al.* 2000). The rapid maturation of *Plectranthus* individuals from seed (one growing season) with the potential for repeated generation turnover is thought to enable relatively rapid speciation within a given locality once new genetic changes arise in a population.

Accumulation of a number of field collections, together with a critical examination of previously described taxa and herbarium collections, now enable a further new species to be named. The new species has a restricted distribution on several offshore continental islands in north-east Queensland.

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Materials and methods

This paper is based on collections in Australian herbaria, particularly BRI and QRS. Live material of *Plectranthus batianoffii* was cultivated for nearly 20 years in Brisbane enabling observation of variation under different ecological conditions.

Taxonomy

Plectranthus batianoffii P.I.Forst., **species nova** *P. foetido* Benth. affinis, sed habitu suffruticis decumbentis usque ad 30 cm altitudine non fruticiformi usque ad 2 m altitudine, foliis vix odoratis non valde aromaticis, pagina inferiore folii laminae trichomatibus antrorsis non-glandularibus (adversum divaricatis vel retrorsis) praedita, verticillastris flores plures (12–18 non 6–11) ferentibus differens. **Typus:** Queensland. Cook District: Palfrey Island, 14°42′S, 145°28′E, 23 July 1990, *G.N.Batianoff 12118* (holo: BRI [1 sheet]).

Prostrate to semi-erect herb to subshrub up to 30 cm high; foliage with ± no scent when crushed, slightly clammy; non-glandular and glandular trichomes clear to purplish, sessile glands 8-celled and orange. Roots fibrous. Stems ± square, erect to straggling, succulent, the lower parts up to 10 mm diameter, grey-green, non-glandular trichomes sparse, antrorse, 6–10-celled up to 2 mm long, glandular trichomes scattered, sessile glands scattered. Leaves discolorous, petiolate; petioles 5–18 mm long, 3–4 mm wide, weakly channelled above, non-glandular trichomes

dense, antrorse, 6–12-celled up to 3.2 mm long, glandular trichomes absent, sessile glands scattered; lamina broadly ovate to triangular, ± succulent, 30–60 mm long, 30–50 mm wide, crenate with 15–19 teeth up to 2 mm long on each margin, widest above middle, secondary teeth usually present; tip acute; base truncate; upper surface grey-green, veins impressed and velutinous, non-glandular trichomes dense, divaricate to antrorse, 6–12-celled up to 1.5 mm long, glandular trichomes absent, sessile glands absent; lower surface silver-green, veins raised and velutinous, non-glandular trichomes dense, antrorse, 6–12-celled up to 2 mm long, glandular trichomes absent, sessile glands dense. Inflorescence up to 200 mm long, comprising 1–3 pedunculate branches from near the base; verticillasters 12–18-flowered, up to 8 mm apart; pedicels 1.6–1.8 mm long, *c.* 0.3 mm diameter, non-glandular trichomes sparse, antrorse, 6–8-celled up to 1 mm long, glandular trichomes scattered, sessile glands absent; cymes sessile; axis square in cross-section, non-glandular trichomes sparse, antrorse, 6–12-celled up to 2 mm long, glandular trichomes absent, sessile glands scattered; bracts broadly-ovate, 1.6–1.8 mm long, 2–2.2 mm wide, not forming a coma, non-glandular trichomes sparse, antrorse, 6–10-celled up to 1 mm long, glandular trichomes absent, sessile glands sparse. Flowering calyx 3.2–3.5 mm long, non-glandular trichomes dense, antrorse, 6–8-celled up to 1.2 mm long, glandular trichomes scattered, sessile glands sparse. Fruiting calyx 3.8–4.5 mm long; upper lobe obovate to ovate, 2–2.5 mm long, 1.8–2.2 mm wide; lateral lobes lanceolate, 1.9–2.2 mm long, 0.6–0.8 mm wide; lower lobes lanceolate-falcate, 2–2.3 mm long, 0.5–0.7 mm wide. Corolla 8.5–10 mm long, pale lilac; tube 4.5–5.5 mm long, weakly curved at 110–120° 2–2.5 mm from base, slightly inflated upwards, glabrous or with non-glandular trichomes scattered, divaricate, 2–4-celled to 0.3 mm long; upper lobes suborbicular, recurved, 1.7–1.9 mm long, 1.6–2 mm wide, non-glandular trichomes sparse, divaricate, 2–4-celled up to 0.4 mm long, glandular trichomes absent, sessile glands sparse; lateral lobes oblong, 1–1.2 mm long, 0.5–0.7 mm wide, non-glandular trichomes absent, glandular trichomes absent, sessile glands scattered; lower lobe broadly ovate, 3.2–4.5 mm long, 3.5–4 mm long, non-glandular trichomes sparse, divaricate, 2–6-celled up to 0.5 mm long, glandular trichomes absent, sessile glands scattered. Filaments filiform, 7–8 mm long, *c.* 0.3 mm diameter, lilac, fused for 4–5 mm from base; anthers *c.* 0.4 mm long and 0.3 mm wide. Style filiform, 7–8 mm long, lilac, bifid for *c.* 0.3 mm. Nutlets ± circular in outline, ± flattened, *c.* 0.9 mm long, 0.8 mm wide and 0.5 mm thick, smooth, glossy brown. **Fig. 1.**

***Additional specimens examined*: Queensland.** Cook District: Stanley Island, Jun 1995, *Le Cussan 606* (BRI); [all subsequent collections from Lizard Island] Oct 1967, *Heatwole 75* (BRI); Jul 1969, *Heatwole s.n.* (BRI [AQ007940]); Dec 1974, *Specht LI218 & Specht* (BRI); Dec 1974, *Specht LI416 & Specht* (BRI); Sep 1988, *Batianoff 10216* (BRI); Jul 1990, *Batianoff 12087* (BRI, MEL). Cultivated: Indooroopilly (ex Lizard Island), Nov 1994, *Forster 15894* (BRI).

***Distribution and habitat*:** *Plectranthus batianoffii* has been found only on Lizard, Palfrey and Stanley Islands on the north-east Queensland coast. Plants occur on granite outcrops and pavements or occasionally in boulder strewn grassland.

***Notes*:** *Plectranthus batianoffii* was first collected in 1967 by Hal Heatwole; however, the taxonomic identity of the plants was not questioned until the late 1980s when George Batianoff first collected material.

On the basis of gross morphology, the most obvious allied species to *Plectranthus batianoffii* appears to be *P. foetidus* Benth. which is distributed to the south of Lizard and Palfrey Islands. The new species differs from *P. foetidus* by the decumbent subshrub habit to 30 cm high (versus a shrub up to 2 m tall), the barely scented foliage (versus strongly aromatic), the lower surface of the leaf lamina with antrorse non-glandular trichomes (versus divaricate to retrorse) and the vertillasters with more flowers (12–18 versus 6–11).

***Etymology*:** The specific epithet honours George N. Batianoff, botanist at the Queensland Herbarium and specialist on Queensland's island floras.

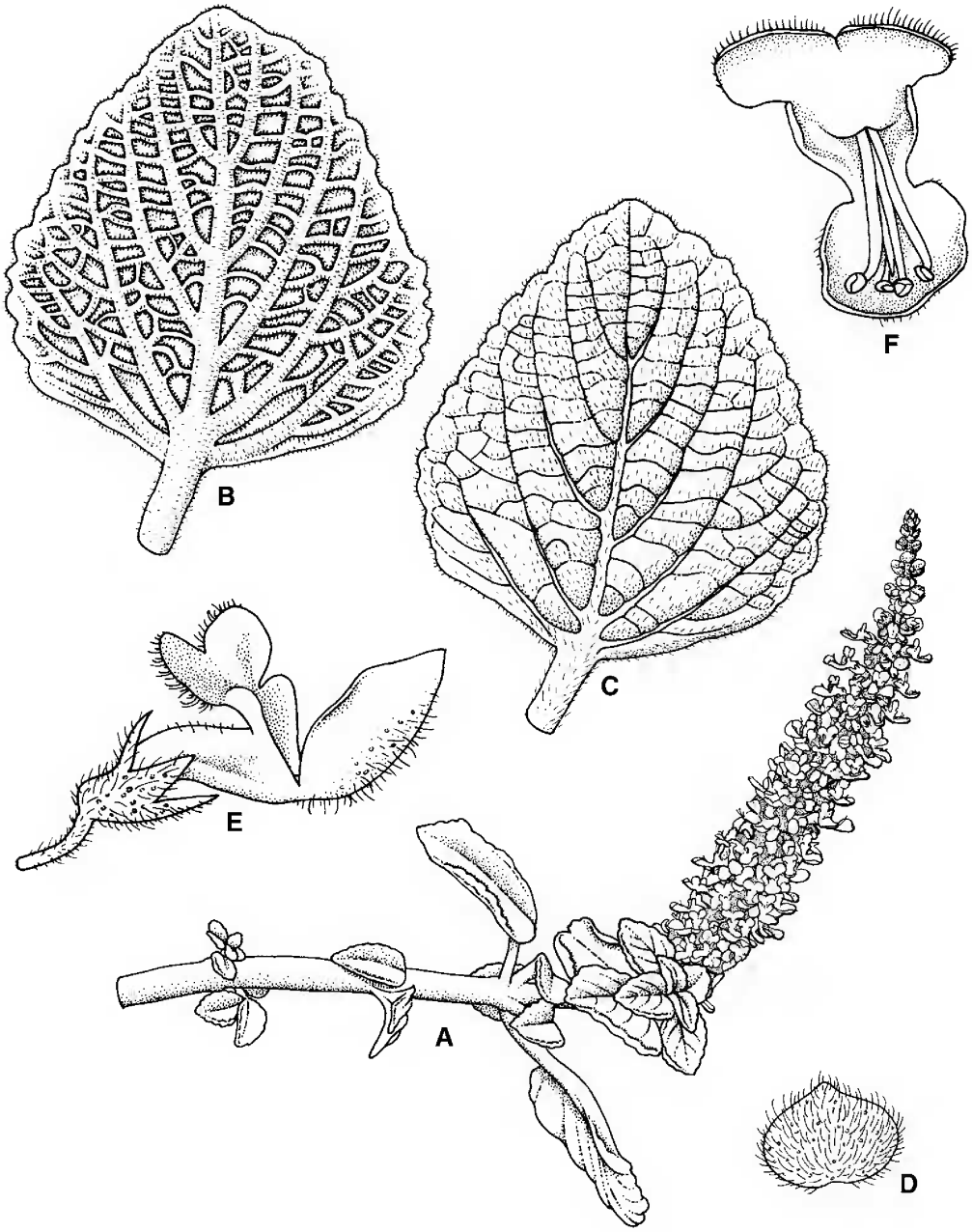

Fig. 1. ***Plectranthus batianoffii***. A. flowering stem × 0.5. B. abaxial view of leaf × 1.5. C. adaxial view of leaf × 1.5. D. inflorescence bract × 6. E. lateral view of flower × 6. F. face view of flower × 6. All from *Forster PIF15894* (BRI). Del. W. Smith & B. Connell.

***Conservation status*:** *Plectranthus batianoffii* is known from three populations, all situated on rather small offshore islands. The species can be assessed as Vulnerable on the criterion D2 (IUCN 2001).

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